

REMARKS

Claims 1-19, as amended, remain herein. Claims 1, 7, 10 and 13 have been amended. Claims 14-19 have been added, and are supported by page 9, lines 2-4 of applicants' specification.

1. Applicants have amended claim 7 to moot the noted informality. (see Office Action: page 2)

2. The drawings were objected to as not in compliance with 37 C.F.R. § 1.83 (a). Applicants respectfully submit that the drawings fully comply with C.F.R. § 1.83. One ordinarily skilled in the art reading applicants' specification along with the drawings would understand that the labeled area 7 depicts the claimed "analysis area." There is a specific reference thereto in the specification, page 9, lines 6-10: "A reagent portion 7 coated with a reagent reactive with a constituent to be analyzed ... is provided on a surface portion of the substrate 2 corresponding to the analysis area. The drawings fully support each and every structural recitation of the claims, per MPEP § 608.02 (d). The Office Action on page 3 seems to refer to the fact that the analysis disk depicted in the filed Figures shows multiple channels in the disk. These Figures showing multiple channels in the disk still support the claims, even if the claims may recite a single channel in the disk.

3. Claims 1-13 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite.

Applicants have amended claim 1 to recite "...the analysis disk rotatable about an axis thereof."

With respect to independent claims 1 and 13, applicants used two distinct recitations, and the "outer periphery" and the "radially outer end portion of the channel" each refers to a different area within the channel.

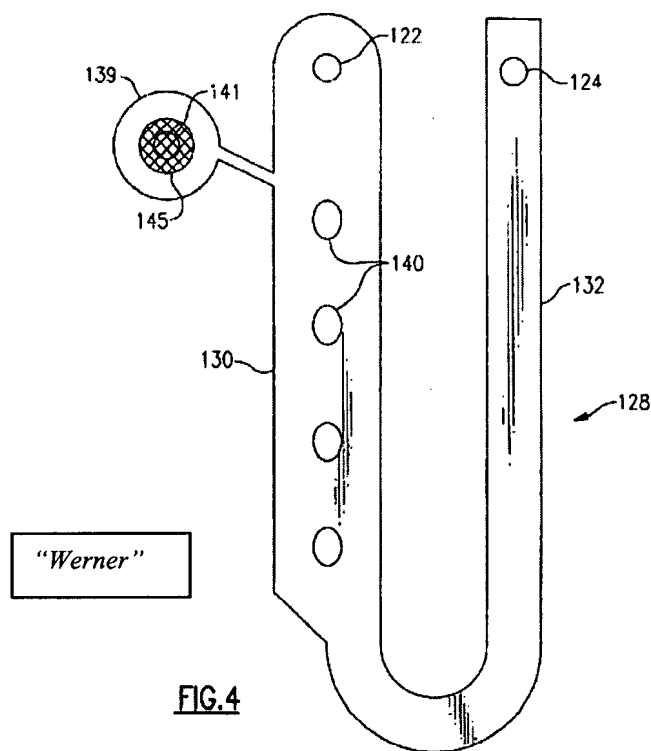
With respect to the contention that the claims are not consistent with the drawings, while the drawings depict multiple channels, such drawings still adequately support the claims that may recite only a single channel (See MPEP § 2111).

Applicants have amended claim 10 to clarify that the hydrophobic material is in a "portion of the channel *which is* radially inward of the outer end portion provided with the water absorbing member."

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejections based on 35 U.S.C. § 112, second paragraph.

4. Claims 1-6, 8-10 and 13 were rejected under 35 U.S.C. § 102 (e) over Werner et al. U.S Patent No. 7,083,920.

Werner fails to disclose or suggest "a water absorbing member" which is "provided in the outer end portion of the channel," as recited in Applicants' claims 1 and 13. Werner generally describes a conjugated enzyme based assay system utilizing reflective and/or transmissive optical discs for detection of specific sequences of nucleic acids (see Werner: col. 1, lines 17-23). Werner provides a "bio disk" with fluidic circuits 128 shown below in Fig. 4 of Werner (see Werner: col. 11, lines 62-66).



The Office Action argues that the membrane/pad 145 describes the claimed “water absorbing member” (see Office Action: page 4). However, the side chamber 139 which contains the membrane/pad 145 is described in Werner as another inlet port for introducing the enzyme and the enzyme buffer (see Werner: col. 20, lines 1-5, “In an alternative embodiment, enzyme buffer is introduced through an enzyme buffer port into a side chamber (not shown), which is in fluid communication with the flow channel and which contains a pad or membrane onto which enzyme has been dried as described above in conjunction with FIG. 4.”). But, side chamber 139 is not “in the outer end portion of the channel,” since Werner states that “the buffer solubilizes the enzyme which *then* [emphasis added] flows into the flow channel 130” (see Werner: col. 20, lines 6-7). In other words, the side chamber 139 merely serves as another inlet port through

which the enzyme and the enzyme buffer are initially introduced, and is not a “water absorbing member” “provided *in the outer end portion of the channel*,” as recited in Applicants’ claims 1 and 13.

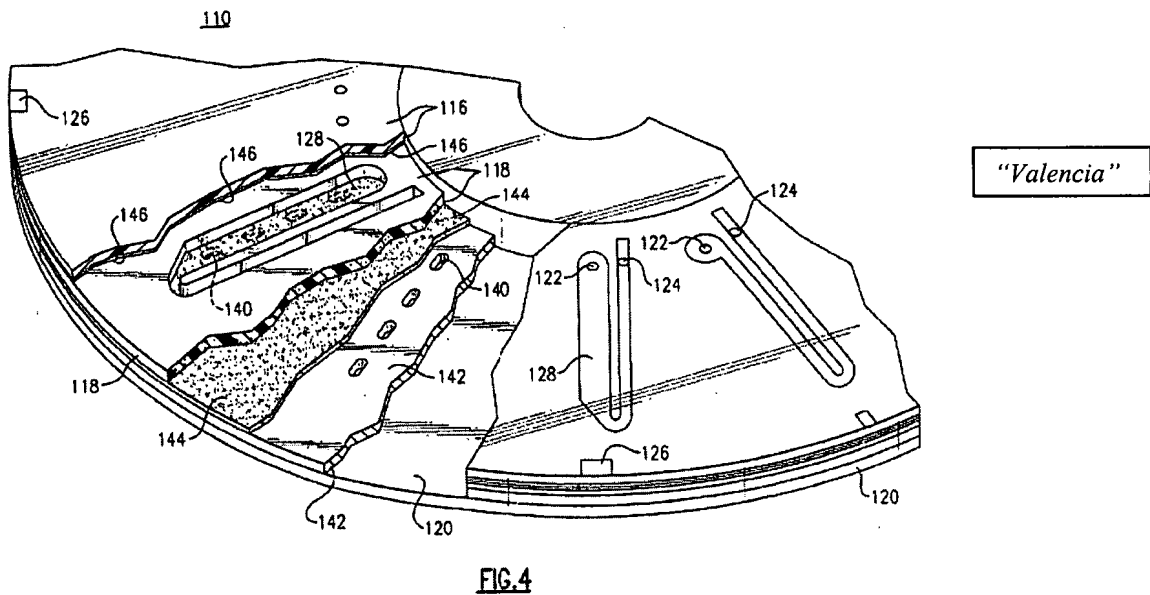
Thus, Werner does not disclose all elements of applicants’ claimed invention and therefore is not a proper basis for a rejection under § 102. Nor does Werner suggest applicants’ claimed invention. Accordingly, reconsideration and withdrawal of this rejection, and allowance of claims 1, 2-6, 8-10 and 13, are respectfully requested.

5. Claims 1-6 and 8-13 were rejected under 35 U.S.C § 102 (e) over Valencia et al. U.S Published Patent Application 2003/0219713.

Valencia relates to an optical bio-disc similar to the one described in Werner. Valencia Fig. 4 shows a fluidic circuit 128 or U-channels formed on the disk. However, Valencia fails to disclose or suggest Applicants’ claimed “water absorbing member” which is “provided in the outer end portion of the channel.”

The Office Action argues that the adhesive layer 144 describes the claimed water absorbing member. But, in fact, the active layer 144 is merely a light transmissive layer applied over the reflective layer 142 (see Valencia ¶ [0188]). There is no description in Valencia that the active layer 144 is a water absorbing member. Valencia ¶ [0188] states that the active layer is a material that is water-proof: “In the preferred embodiment, the active layer 144 may be formed from polystyrene.” Further, Valencia ¶ [0415] describes that the bio-disc system utilizes spin drying as a preferred way of disposing of any excess water remaining in the fluidic circuit 128: “Excess antibody was rinsed off with D. I. water and the disc was spun dry [emphasis added].”).

Therefore, Valencia fails to disclose or suggest the “water absorbing member,” as recited in Applicants’ claims 1 and 13.



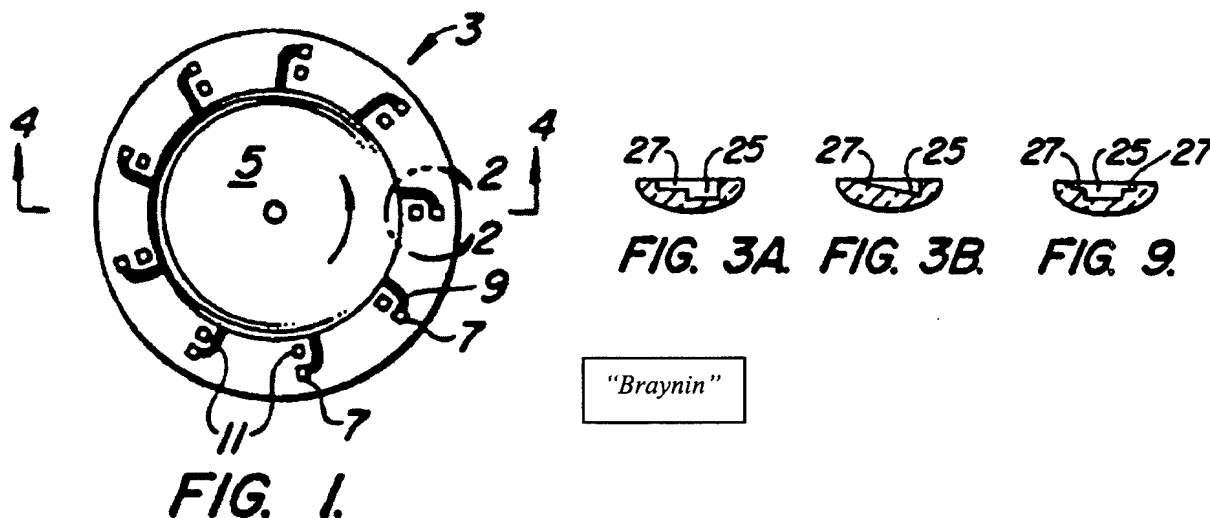
Valencia does not disclose all elements of applicants’ claimed invention and therefore is not a proper basis for a rejection under § 102. Nor does Valencia suggest applicants’ claimed invention. Accordingly, reconsideration and withdrawal of this rejection, and allowance of claims 1, 2-6, 8-12 and 13, are respectfully requested.

6. Claims 1-7 and 9-13 were rejected under 35 U.S.C § 102 (e) over Braynin et al. U.S Published Patent Application No. 2003/0219712.

Braynin Fig. 1 shows a centrifugal rotor 4 with a plurality of peripheral cuvettes 7, each connected to a central collection chamber 5 by a generally radial inlet channel 9 which has a discrete flow path 25 for flow of liquid into the cuvette and a second discrete flow path 27 for

flow of gas out of the cuvette as the rotor spins.

The Office Action seems to be citing the first flow path 25 of the inlet channel 9 as a “water absorbing member.” However, Braynin describes that the first flow path 25 is a path for the flow of liquid into the cuvette 7 (see Braynin: col. 6, lines 50-53). The liquid flow path 25 is described as “hydrophilic,” not “water absorbing.” Braynin, col. 7, lines 19-31, disclose that the liquid flow path 25 is hydrophilic merely to ease the flow of liquid and to avoid interference with the exiting gas flow. Braynin states that the first flow path 25 delivers the liquid part of the inputted biological fluid, and therefore, the hydrophilic liquid flow path 25 is not a “water absorbing member,” as recited in applicants’ claims 1 and 13 (see Braynin; col. 6, lines 46-47,



“Each cuvette 7 is connected to the collection chamber 5 by an inlet channel 9.”).

Thus, Braynin does not disclose all elements of applicants’ claimed invention and therefore is not a proper basis for a rejection under § 102. Nor does Braynin suggest applicants’ claimed invention. Accordingly, reconsideration and withdrawal of this rejection, and allowance of claims 1, 2-6, 8-10 and 13, are respectfully requested.

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7. Claim 7 was rejected under 35 U.S.C § 103 (a) over Werner. Claim 7 was also rejected under 35 U.S.C. § 103 (a) over Valencia. Claims 11 and 12 were rejected under 35 U.S.C. § 103 (a) over Werner in view of Valencia .

As explained earlier in these remarks, there is no disclosure or teaching in either Werner or Valencia of all elements of applicant's claimed invention. Nor is there any disclosure or teaching in either Werner or Valencia that would have suggested applicants' claimed invention to one of ordinary skill in the art. Still further, there is no disclosure or teaching in either of these references that would have suggested the desirability of combining any portions thereof effectively to anticipate or render obvious applicant's claimed invention. Accordingly, reconsideration and withdrawal of these grounds of rejection, and allowance of claims 7, 11 and 12 are respectfully requested.

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Accordingly, this application is now fully in condition for allowance and a notice to that effect is respectfully requested. The PTO is hereby authorized to charge/credit any fee deficiencies or overpayments to Deposit Account No. 19-4293 (Order No. 28951.5330). If further amendments would place this application in even better condition for issue, the Examiner is invited to call applicant's undersigned attorney at the number listed below.

Respectfully submitted,

STEPTOE & JOHNSON

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